

In the Claims

Claim 1 (currently amended): A process for forming a contact opening to a semiconductor material, said process comprising:

forming an undoped silicon dioxide layer over a layer of semiconductor material;

selecting an etch process that is selective to undoped ~~silicon dioxide, silicon, and silicon nitride~~ silicon dioxide and to silicon;

forming a doped silicon dioxide layer over said undoped silicon dioxide layer; and

selectively removing by said etch process at a total etch pressure in the range from about 1 millitorr to about 400 millitorr and by using an etchant selected from the group consisting of C<sub>2</sub>F<sub>6</sub>, C<sub>3</sub>F<sub>8</sub>, C<sub>4</sub>F<sub>10</sub>, CH<sub>2</sub>F<sub>2</sub>, C<sub>2</sub>HF<sub>5</sub>, CH<sub>3</sub>F, and combinations thereof, a portion of said doped silicon dioxide layer at a material removal rate that is higher for doped silicon dioxide than for undoped silicon dioxide or for said layer of semiconductor material to form an opening extending to a contact surface on said layer of semiconductor material.

Claim 2 (original): A process as recited in Claim 1, wherein selectively removing said doped silicon dioxide layer comprises:

forming a layer of photoresist over said doped silicon dioxide layer;  
patterning said layer of photoresist; and  
etching said doped silicon dioxide layer through the pattern of said layer of photoresist.

Claim 3 (original): A process as recited in Claim 1, wherein the semiconductor material is monocrystalline silicon.

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Claim 4 (original): A process as recited in Claim 1, wherein selective removing said doped silicon dioxide layer comprises a plasma etching process for etching said doped silicon dioxide layer in a plasma etcher.

Claim 5 (previously amended): A process as recited in Claim 4, wherein said plasma etching process has a plasma density in a range from about  $10^9$  ions/cm<sup>3</sup> to about  $10^{13}$  ions/cm<sup>3</sup>.

Claim 6 (previously amended): A process as recited in Claim 4, wherein said plasma etching process is conducted in a pressure range from about 1 millitorr to about 100 millitorr.

Claim 7 (original): A process as recited in Claim 4, wherein during said plasma etching process said reactor cathode has a temperature range from about 10°C to about 80°C.

Claim 8 (original): A process as recited in Claim 4, wherein the temperature range of the semiconductor material during said plasma etching process is from about 40°C to about 130°C.

Claim 9 (previously amended): A process as defined in Claim 1, wherein said material removal rate is at least 10 times higher for doped silicon dioxide layer than for undoped silicon dioxide or for said layer of semiconductor material.

Claim 10 (original): A process as defined in Claim 9, wherein selectively removing said doped silicon dioxide layer comprises etching of said doped silicon dioxide with an etchant selected from the group consisting of  $\text{CH}_2\text{F}_2$  and  $\text{CH}_3\text{F}$ .

Claim 11 (previously canceled).

Claim 12 (original): A process as recited in Claim 1, wherein said doped silicon dioxide layer is selected from the group consisting of BPSG, PSG, and BSG.

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Claim 13 (currently amended): A process for forming contact to a semiconductor material, said process comprising:

forming an undoped silicon dioxide layer over a layer of monocrystalline silicon;

forming a doped silicon dioxide layer over said undoped silicon dioxide layer, said doped silicon dioxide layer being selected from the group consisting of BPSG, PSG, and BSG;

forming a layer of photoresist over said doped silicon dioxide layer;

patterning said layer of photoresist;

selecting an etch process that is selective to undoped ~~silicon dioxide, silicon, and silicon nitride~~ silicon dioxide and to silicon;

etching with said etch process said doped silicon dioxide layer through the pattern of said layer of photoresist at a material removal rate that is higher for doped silicon dioxide layer than for undoped silicon dioxide layer or for said layer of monocrystalline silicon to form an opening extending to said layer of monocrystalline silicon, said etching being a plasma etching process in a plasma etcher, said plasma etching process being conducted:

at a pressure range from about 1 millitorr to about 400 millitorr;

a temperature range of the cathode that is from about 10°C to about 80°C;

in a plasma density in a range from about  $10^9$  ions/cm<sup>3</sup> to about  $10^{13}$  ions/cm<sup>3</sup> with a fluorinated chemical etchant selected from the

group consisting of  $C_2F_6$ ,  $C_3F_8$ ,  $C_4F_{10}$ ,  $CH_2F_2$ ,  $C_2HF_5$ ,  $CH_3F$ , and combinations thereof.

Claim 14 (original): A process as recited in Claim 13, wherein the temperature range of the semiconductor material during said plasma etching process is from about 40°C to about 130°C.

Claim 15 (previously canceled).

Claim 16 (original): A process as defined in Claim 13, wherein selectively removing said doped silicon dioxide layer comprises etching of said doped silicon dioxide with an etchant selected from the group of  $CH_2F_2$  and  $CH_3F$ .

Claim 17 (original): A process as recited in Claim 13, wherein said plasma etching process is conducted at a material removal rate that is at least 10 times higher for doped silicon dioxide than for undoped silicon dioxide or for said semiconductor material.

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Claim 18 (currently amended) A process for forming a contact to a semiconductor substrate comprising:

providing a gate oxide layer over the semiconductor substrate;

providing a pair of gate stacks in spaced relation to one another on the semiconductor substrate, each of said gate stacks having at least one conductive layer formed therein and an undoped silicon dioxide layer extending over said conductive layer;

forming a spacer, ~~composed~~ comprised of undoped silicon dioxide, adjacent to each of said gate stacks;

forming a doped silicon dioxide layer over said pair of gate stacks and over said exposed surface on said semiconductor substrate;

selecting an etch process that is selective to undoped ~~silicon dioxide, silicon, and silicon nitride~~ silicon dioxide and to silicon;

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selectively removing with said etch process a portion of said doped silicon dioxide layer between said pair of gate stacks to expose said surface on said semiconductor substrate, while removing less of said undoped silicon dioxide layer over said pair of gate stacks, wherein said etching removes doped silicon dioxide at a material removal rate that is at least 10 times higher than for each of undoped silicon dioxide, the spacer, and the semiconductor substrate.

Claim 19 (currently amended): A process for forming a contact to a semiconductor substrate comprising:

providing a gate oxide layer over the semiconductor substrate;

providing a pair of gate stacks in spaced relation to one another on the semiconductor substrate, each of said gate stacks having at least one conductive layer formed therein and an undoped silicon dioxide layer extending over said conductive layer, wherein each said gate stack is formed by:

forming a polysilicon layer over said gate oxide layer;

forming a refractory metal silicide layer over said polysilicon layer; and

forming an undoped silicon dioxide layer over said refractory metal silicide layer;

forming a spacer, composed comprised of undoped silicon dioxide, adjacent to each of said gate stacks;

forming a doped silicon dioxide layer over said pair of gate stacks and over said exposed surface on said semiconductor substrate;

selecting an etch process that is selective to undoped ~~silicon dioxide, silicon, and silicon nitride~~ silicon dioxide and to silicon;

selectively removing with said etch process a portion of said doped silicon dioxide layer between said pair of gate stacks to expose said surface on said semiconductor substrate, while removing less of said undoped

silicon dioxide layer over said pair of gate stacks, wherein said etching removes doped silicon dioxide at a material removal rate that is at least 10 times higher than for each of undoped silicon dioxide, the spacer, and the semiconductor substrate.

Claim 20 (previously amended): A process as recited in Claim 19, further comprising selectively removing portions of said undoped silicon dioxide layer, said refractory metal silicide layer, said polysilicon layer, and said gate oxide layer.

Claims 21-23 (canceled).

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CnX* Claim 24 (original): A process as recited in Claim 18, wherein the semiconductor material is monocrystalline silicon.

Claim 25 (original): A process as recited in Claim 18, wherein said plasma etcher is selected from the group consisting of an RF RIE etcher, a MERIE etcher, and a high density plasma etcher.

Claim 26 (previously amended): A process as recited in Claim 18, further comprising forming a contact plug comprising a conductive material and situated between said pair of gate stacks and over said surface on said semiconductor substrate.

Claim 27 (previously amended): A process as recited in Claim 20, wherein said refractory metal silicide layer is tungsten silicide.

Claim 28 (original): A process as recited in Claim 18, wherein said doped silicon dioxide layer is selected from the group consisting of BPSG, PSG, and BSG.

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Claim 29 (currently amended) A process as recited in Claim 18,  
wherein selectively removing said doped silicon dioxide layer comprises:  
    forming a layer of photoresist over said doped silicon dioxide layer;  
    ~~selecting at etch process that is selective to undoped silicon dioxide,~~  
~~silicon, and silicon nitride;~~  
    patterning said layer of photoresist; and  
    etching with said etch process said doped silicon dioxide layer through  
the pattern of said layer of photoresist in a plasma etching process in a  
plasma etcher, said plasma etching process being conducted:  
        at a pressure range from about 1 millitorr to about 400 millitorr;  
        a temperature range of reactor cathode that is from about 10°C  
to about 80°C;  
        a temperature range of the semiconductor material is from about  
40°C to about 130°C;  
        in a plasma density in a range from about  $10^9$  ions/cm<sup>3</sup> to  
about  $10^{13}$  ions/cm<sup>3</sup>; and  
        with a fluorinated chemical etchant.

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Claim 30 (previously amended): A process as recited in Claim 29,  
wherein said fluorinated chemical etchants are selected from the group  
consisting of C<sub>2</sub>F<sub>6</sub>, C<sub>3</sub>F<sub>8</sub>, C<sub>4</sub>F<sub>10</sub>, CH<sub>2</sub>F<sub>2</sub>, C<sub>2</sub>HF<sub>5</sub>, CH<sub>3</sub>F, and combinations  
thereof.

Claim 31 (currently amended): A process for forming a contact to a semiconductor material comprising:

depositing a gate oxide layer over a layer of silicon of a semiconductor substrate;

depositing a polysilicon layer over said gate oxide layer;

depositing a refractory metal silicide layer over said polysilicon layer;

depositing an undoped silicon dioxide layer over said refractory metal silicide layer;

selectively removing portions of said undoped silicon dioxide layer, said refractory metal silicide layer, said polysilicon layer, and said gate oxide layer so as to form a pair of gate stacks separated by an exposed portion of said silicon layer, each said gate stack having a lateral side perpendicular to said gate oxide layer and being comprised of:

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said undoped silicon dioxide layer as the top layer thereof;

said refractory metal silicide layer;

said polysilicon layer; and

said gate oxide layer as the bottom layer thereof;

forming a spacer on the lateral side of each said gate stack from a layer of spacer material;

selecting an etch process that is selective to undoped silicon dioxide, ~~silicon, and silicon nitride~~ silicon dioxide and to silicon;

depositing a doped silicon dioxide layer over said pair of gate stacks and over said exposed portion of said silicon layer, said doped silicon dioxide layer being selected from the group consisting of BPSG, PSG, and BSG; and

etching with said etch process said doped silicon dioxide layer with a plasma etching system having a plasma density in a range from about  $10^9$  ions/cm<sup>3</sup> to about  $10^{13}$  ions/cm<sup>3</sup> in an etcher selected from the group consisting of RF RIE, MERIE plasma etching system, and high density plasma etching system, said plasma etching system having a pressure range from about 1 millitorr to about 400 millitorr, said doped silicon dioxide layer being etched between said pair of gate stacks so as to expose said exposed portion of said silicon layer, said etching having a material removal rate that is higher for doped silicon dioxide than for undoped silicon dioxide, said spacer material, or silicon, said etching of said doped silicon dioxide being conducted with a fluorinated chemical etchant selected from the group consisting of C<sub>2</sub>F<sub>6</sub>, CF<sub>4</sub>, C<sub>3</sub>F<sub>8</sub>, C<sub>4</sub>F<sub>10</sub>, CH<sub>2</sub>F<sub>2</sub>, C<sub>2</sub>HF<sub>5</sub>, CH<sub>3</sub>F, and combinations thereof.

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Claim 32 (previously amended): A process as recited in Claim 31, wherein the spacer material comprises one of silicon nitride and undoped silicon dioxide.

Claim 33 (previously amended): A process as recited in Claim 31, further comprising forming a contact plug comprising a conductive material and situated between said pair of gate stacks and over the exposed portion of said silicon layer.

Claim 34 (previously amended): A process as recited in Claim 31, wherein the material removal rate is at least 10 times higher for doped silicon dioxide than for undoped silicon dioxide.

Claim 35 (original): A process as recited in Claim 31, wherein during etching of said doped silicon dioxide layer with said plasma etching system, the temperature range of said reactor cathode is from about 10°C to about 80°C.

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Claim 36 (original): A process as recited in Claim 31, wherein the temperature range of the semiconductor material during said plasma etching process is from about 40°C to about 130°C.

Claim 37 (currently amended): A process for forming a gate structure comprising:

providing a multilayer structure comprising a layer of silicon dioxide over a layer of silicon;

depositing a layer of undoped silicon dioxide over said multilayer structure using a precursor having a gaseous silane, hydrogen, and oxygen flow;

forming a first layer of photoresist over said layer of undoped silicon dioxide;

patterning said first photoresist layer to form a first pattern;

etching said layer of undoped silicon dioxide and said multilayer structure through said first pattern to expose a contact surface on at least a portion of said layer of silicon;

depositing a layer of a nonconductive material over said layer of undoped silicon dioxide and said contact surface on said layer of silicon;

etching said layer of said nonconductive material to thereby create a spacer over a lateral side of said layer of undoped silicon dioxide and over a lateral side of said multilayer structure, said spacer being generally perpendicular to said layer of silicon;

removing said first layer of photoresist;

depositing a doped silicon dioxide layer over said multilayer structure;

forming a said second layer of photoresist over said layer of doped silicon dioxide;

patterning said second layer of photoresist to form a second pattern;  
selecting an etch process that is selective to undoped ~~silicon dioxide~~,  
~~silicon, and silicon nitride~~ silicon dioxide and to silicon;  
etching with said etch process said layer of doped silicon dioxide and  
said multilayer structure with a carbon fluorine etch that is an anisotropic  
plasma etch using fluorinated chemical etchants selected from the group  
consisting of  $C_2F_6$ ,  $CF_4$ ,  $C_3F_8$ ,  $C_4F_{10}$ ,  $CH_2F_2$ ,  $C_2HF_5$ ,  $CH_3F$ , and combinations  
thereof, and that etches through said second pattern to expose said contact  
surface on said layer of silicon, said etching having a material removal rate  
that is at least 10 times greater for doped silicon dioxide than for undoped  
silicon dioxide, photoresist, or nonconductive material;  
removing said second layer of photoresist; and  
forming a contact plug ~~composed~~ comprised of a conductive material  
in contact with said contact surface on said layer of silicon.

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Claim 38 (original): A process as recited in Claim 37, wherein said  
nonconductive material is one of silicon nitride and substantially undoped  
silicon dioxide.

Claim 39 (previously canceled).

Claim 40 (original): A process as recited in Claim 37, wherein said multilayer structure further comprises layers of gate oxide, polysilicon, and refractory metal silicide.

Claim 41 (previously amended): A process as recited in Claim 37, wherein said doped silicon dioxide layer is selected from the group consisting of BPSG, PSG, and BSG.

Claim 42 (previously amended): A process as recited in Claim 37, wherein etching said layer of doped silicon dioxide and said multilayer structure with a carbon fluorine etch utilizes a plasma etching system selected from the group consisting of RF RIE, MERIE system, and a high density plasma etch system.

*[Handwritten mark: A large 'X' is drawn through the first two lines of text above, indicating they are not part of the current claim set.]*

Claim 43 (previously amended): A process as recited in Claim 37, wherein etching said layer of doped silicon dioxide and said multilayer structure with a carbon fluorine etch is a plasma etching process being conducted:

at a pressure range from about 1 millitorr to about 400 millitorr;

a temperature range of reactor cathode that is from about 10°C to about 80°C;

a temperature range of the semiconductor material is from about 40°C to about 130°C;

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in a plasma density in a range from about  $10^9$  ions/cm<sup>3</sup> to about  $10^{13}$  ions/cm<sup>3</sup>; and

with a fluorinated chemical etchant.

Claim 44 (currently amended): A process for forming a gate structure comprising:

providing a multilayer structure situated over a layer of silicon and comprising layers of gate oxide, polysilicon, and refractory metal silicide;

depositing a layer of undoped silicon dioxide over said multilayer structure using a precursor having a gaseous silane, hydrogen, and oxygen flow;

forming a first layer of photoresist over said layer of undoped silicon dioxide;

patterning said first photoresist layer to form a first pattern;

etching said layer of undoped silicon dioxide and said multilayer structure through said first pattern to expose a contact surface on at least a portion of said layer of silicon;

removing said first layer of photoresist;

depositing a layer of a nonconductive material over said layer of undoped silicon dioxide and said contact surface on said layer of silicon;

etching said layer of said nonconductive material to thereby create a spacer over a lateral side of said layer of undoped silicon dioxide and over a lateral side of said multilayer structure, said spacer being generally perpendicular to said layer of silicon;

depositing a doped silicon dioxide layer over said multilayer structure and over said contact surface on said layer of silicon, wherein said doped

silicon dioxide layer is selected from the group consisting of BPSG, PSG, and BSG;

forming a second layer of photoresist over said layer of doped silicon dioxide;

patterning said second layer of photoresist to form a second pattern;

selecting an etch process that is selective to undoped ~~silicon dioxide, silicon, and silicon nitride~~ silicon dioxide and to silicon;

etching with said etch process said layer of doped silicon dioxide and said multilayer structure with a carbon fluorine etch through said second pattern to expose said contact surface on said layer of silicon, said etching having a material removal rate that is at least 10 times greater for doped silicon dioxide than for undoped silicon dioxide, photoresist, or nonconductive material, wherein said carbon fluorine etch is an anisotropic plasma etch using a fluorinated chemical etchant selected from the group consisting of  $C_2F_6$ ,  $CF_4$ ,  $C_3F_8$ ,  $C_4F_{10}$ ,  $CH_2F_2$ ,  $C_2HF_5$ ,  $CH_3F$ , and combinations thereof, wherein said etching of said doped silicon dioxide utilizes a plasma etching system having a plasma density in a range from about  $10^9$  ions/cm<sup>3</sup> to about  $10^{13}$  ions/cm<sup>3</sup> at a pressure in a range from about 1 millitorr to about 400 millitorr, the temperature range of said reactor cathode during said plasma etch being about 10°C to about 80°C, and the temperature range of the semiconductor material during said plasma etch being in the range of about 40°C to about 130°C;

removing said second layer of photoresist; and

forming a contact plug comprising a conductive material in contact with said contact surface on said layer of silicon.

Claim 45 (previously canceled).

Claim 46 (original): A process as recited in Claim 44, wherein said nonconductive material is one of silicon nitride and substantially undoped silicon dioxide.

*GJX* Claims 47-49 (previously canceled).

Claim 50 (currently amended): A method of forming a self-aligned contact, said method comprising:

providing a pair of gate stacks in spaced apart relation to one another on said semiconductor substrate, each of said gate stacks being covered by an undoped silicon dioxide layer;

forming a spacer adjacent to each of said gate stacks;

forming a doped silicon dioxide layer over said pair of gate stacks and over said semiconductor substrate;

forming a layer of photoresist over said silicon dioxide layer;

selecting an etch process that is selective to undoped ~~silicon dioxide, silicon, and silicon nitride~~ silicon dioxide and to silicon;

patterning said layer of photoresist; and

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selectively removing with said etch process a portion of said doped silicon dioxide layer between said pair of gate stacks using an etchant selected from the group consisting of C<sub>2</sub>F<sub>6</sub>, C<sub>3</sub>F<sub>8</sub>, C<sub>4</sub>F<sub>10</sub>, CH<sub>2</sub>F<sub>2</sub>, C<sub>2</sub>HF<sub>5</sub>, CH<sub>3</sub>F, and combinations thereof, to expose a contact surface on said semiconductor substrate through said pattern of said layer of photoresist, while removing less of said undoped silicon dioxide layer over said pair of gate stacks than doped silicon photoresist, said undoped silicon layer being capable of resisting said selective removal process thereby causing said selective removal process to be self-aligning between said pair of gate stacks.

Claim 51 (previously amended): A method as recited in Claim 50, wherein said selective removal of said doped silicon dioxide layer comprises a plasma etching process being conducted:

at a pressure range from about 1 millitorr to about 400 millitorr;

a temperature range of the cathode that is from about 10°C to about 80°C; and

in a plasma density in a range from about  $10^9$  ions/cm<sup>3</sup> to about  $10^{13}$  ions/cm<sup>3</sup>.

Claim 52 (original): A method as recited in Claim 51, wherein the temperature range of the semiconductor material during said plasma etching process is from about 40°C to about 130°C.

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Claim 53 (previously canceled).

Claim 54 (previously amended): A method as recited in Claim 51, wherein said plasma etching process is conducted at a material removal rate that is at least 10 times higher for doped silicon dioxide than for undoped silicon dioxide or for semiconductor material.

Claim 55 (previously added): A process as recited in Claim 1, wherein said doped silicon dioxide layer consists of BSG.

Claim 56 (previously added): A process as recited in Claim 18, wherein said doped silicon dioxide layer consists of BSG.

Claim 57 (previously added): A process as recited in Claim 37, wherein said doped silicon dioxide layer consists of BSG.

Claim 58 (currently amended): A process for forming a contact opening to a semiconductor material, said process comprising:

forming an undoped silicon dioxide layer over a layer of semiconductor material;

selecting an etch process that is selective to undoped ~~silicon dioxide, silicon, and silicon nitride~~ silicon dioxide and to silicon;

forming a BSG layer over said undoped silicon dioxide layer; and

selectively removing by said etch process at a total etch pressure in the range from about 1 millitorr to about 400 millitorr and by using an etchant selected from the group consisting of  $C_2F_6$ ,  $C_3F_8$ ,  $C_4F_{10}$ ,  $CH_2F_2$ ,  $C_2HF_5$ ,  $CH_3F$ , and combinations thereof, a portion of said doped silicon dioxide layer at a material removal rate that is higher for doped silicon dioxide than for undoped silicon dioxide or for said layer of semiconductor material to form an opening extending to a contact surface on said layer of semiconductor material.

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Claim 59 (previously added): The process of claim 1 wherein the etchant comprises  $C_2F_6$ .

Claim 60 (previously added): The process of claim 1 wherein the etchant comprises  $C_3F_8$ .

Claim 61 (previously added): The process of claim 1 wherein the etchant comprises  $C_4F_{10}$ .

Claim 62 (previously added): The process of claim 1 wherein the etchant comprises  $CH_2F_2$ .

Claim 63 (previously added): The process of claim 1 wherein the etchant comprises  $C_2HF_5$ .

Claim 64 (previously added): The process of claim 1 wherein the etchant comprises  $CH_3F$ .

Claim 65 (previously added): The process of claim 13 wherein the etchant comprises  $C_2F_6$ .

Claim 66 (previously added): The process of claim 13 wherein the etchant comprises  $C_3F_8$ .

Claim 67 (previously added): The process of claim 13 wherein  
the etchant comprises  $C_4F_{10}$ .

Claim 68 (previously added): The process of claim 13 wherein  
the etchant comprises  $CH_2F_2$ .

Claim 69 (previously added): The process of claim 13 wherein  
the etchant comprises  $C_2HF_5$ .

Claim 70 (previously added): The process of claim 13 wherein  
the etchant comprises  $CH_3F$ .

Claim 71 (previously added): The process of claim 31 wherein  
the etchant comprises  $C_2F_6$ .

Claim 72 (previously added): The process of claim 31 wherein  
the etchant comprises  $C_3F_8$ .

Claim 73 (previously added): The process of claim 31 wherein  
the etchant comprises  $C_4F_{10}$ .

Claim 74 (previously added): The process of claim 31 wherein  
the etchant comprises  $CH_2F_2$ .

Claim 75 (previously added): The process of claim 31 wherein  
the etchant comprises  $C_2HF_5$ .

Claim 76 (previously added): The process of claim 31 wherein  
the etchant comprises  $CH_3F$ .

Claim 77 (previously added): The process of claim 37 wherein  
the etchant comprises  $C_2F_6$ .

Claim 78 (previously added): The process of claim 37 wherein  
the etchant comprises  $C_3F_8$ .

Claim 79 (previously added): The process of claim 37 wherein  
the etchant comprises  $C_4F_{10}$ .

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Claim 80 (previously added): The process of claim 37 wherein  
the etchant comprises  $CH_2F_2$ .

Claim 81 (previously added): The process of claim 37 wherein  
the etchant comprises  $C_2HF_5$ .

Claim 82 (previously added): The process of claim 37 wherein  
the etchant comprises  $CH_3F$ .

Claim 83 (previously added): The process of claim 44 wherein  
the etchant comprises  $C_2F_6$ .

Claim 84 (previously added): The process of claim 44 wherein  
the etchant comprises  $C_3F_8$ .

Claim 85 (previously added): The process of claim 44 wherein  
the etchant comprises  $C_4F_{10}$ .

Claim 86 (previously added): The process of claim 44 wherein  
the etchant comprises  $CH_2F_2$ .

Claim 87 (previously added): The process of claim 44 wherein  
the etchant comprises  $C_2HF_5$ .

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Claim 88 (previously added): The process of claim 44 wherein  
the etchant comprises  $CH_3F$ .

Claim 89 (previously added): The process of claim 50 wherein  
the etchant comprises  $C_2F_6$ .

Claim 90 (previously added): The process of claim 50 wherein  
the etchant comprises  $C_3F_8$ .

Claim 91 (previously added): The process of claim 50 wherein  
the etchant comprises  $C_4F_{10}$ .

Claim 92 (previously added): The process of claim 50 wherein  
the etchant comprises  $CH_2F_2$ .

Claim 93 (previously added): The process of claim 50 wherein  
the etchant comprises  $C_2HF_5$ .

Claim 94 (previously added): The process of claim 50 wherein  
the etchant comprises  $CH_3F$ .

Claim 95 (previously added): The process of claim 58 wherein  
the etchant comprises  $C_2F_6$ .

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Claim 96 (previously added): The process of claim 58 wherein  
the etchant comprises  $C_3F_8$ .

Claim 97 (previously added): The process of claim 58 wherein  
the etchant comprises  $C_4F_{10}$ .

Claim 98 (previously added): The process of claim 58 wherein  
the etchant comprises  $CH_2F_2$ .

Claim 99 (previously added): The process of claim 58 wherein the etchant comprises  $C_2HF_5$ .

Claim 100 (previously added): The process of claim 58 wherein the etchant comprises  $CH_3F$ .

Claim 101 (new): The method of claim 1 wherein said selecting an etch process is also selective to silicon nitride.

Claim 102 (new): The method of claim 13 wherein said selecting an etch process is also selective to silicon nitride.

Claim 103 (new): The method of claim 18 wherein said selecting an etch process is also selective to silicon nitride.

Claim 104 (new): The method of claim 19 wherein said selecting an etch process is also selective to silicon nitride.

Claim 105 (new): The method of claim 31 wherein said selecting an etch process is also selective to silicon nitride.

Claim 106 (new): The method of claim 37 wherein said selecting an etch process is also selective to silicon nitride.

Claim 107 (new): The method of claim 44 wherein said selecting an etch process is also selective to silicon nitride.

Claim 108 (new): The method of claim 50 wherein said selecting an etch process is also selective to silicon nitride.

Claim 109 (new): The method of claim 58 wherein said selecting an etch process is also selective to silicon nitride.

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